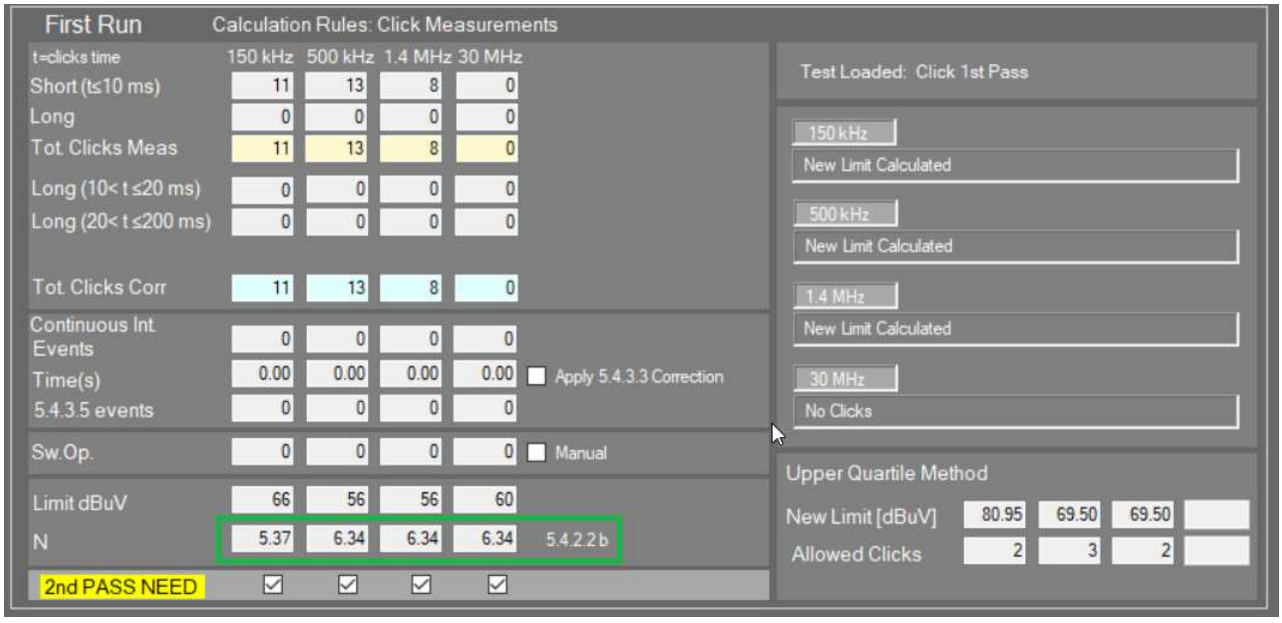
AFJ Click Analysers Conformity
from CISPR 14-1 Edition 6.0 – 2016-08 to CISPR 14-1 Edition 7.0 – 2020-09

AFJ Click Analysers model DDA55+ (and previously models DDA55 and CL55C) are fully compliant to the requirements of the latest editions of CISPR 16-1-1 and CISPR 14-1.
The click measurements are performed simultaneously at the required four frequencies: 150kHz, 500kHz, 1.4MHz and 30MHz (four-channels click analysers).

The actual CISPR 14-1 Edition 6.0 – 2016-08 defines the click rate N as follows:

> **5.4.2.2 Click rate**
>
> The click rate *N* shall be determined:
>
> a) under the operating conditions specified in Clause 6, unless specific operating conditions are given in Annex A;
>
> b) at 150 kHz and 500 kHz. The click rate determined at 500 kHz shall also be used for the analysis at 1,4 MHz and 30 MHz

AFJ Click Analysers satisfy this requirement:



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The standard includes a temporary Interpretation Sheet for the application of the upper quartile method to allow to use the single channel click analysers already installed into the market. This interpretation sheet considers that the most of the clicks are registered at 150kHz and 500kHz.
AFJ Click Analysers satisfy Interpretation 1 of this document following the method used by all four-channels click analysers present into the market since a long time.

Interpretation Sheet 1 to CISPR 14-1: Interpretation of subclause 5.4.2.4 of CISPR 14-1:2016 on the upper quartile method for the evaluation of clicks

Introduction

The evaluation of clicks has to be performed at four frequencies while the determination of the click rate N is made only at two frequencies. The application of the upper quartile method at the frequencies 150 kHz and 500 kHz is clear, while the situation is unclear for the frequencies 1,4 MHz and 30 MHz. This interpretation sheet is intended to clarify this matter.

The click measurement procedure is under revision in CISPR/F WG1 and will be updated in the next amendment to CISPR 14-1:2016.

Question

How should the upper quartile method be applied at the frequencies 1,4 MHz and 30 MHz?

Interpretation

Each of the following two interpretations is valid.

Interpretation 1:

The number of clicks at 1,4 MHz and the number of clicks at 30 MHz which exceed the limit, L, for continuous disturbances during the observation time, T, are measured. The number of clicks at 1,4 MHz and the number of clicks at 30 MHz exceeding L_q are allowed to be one quarter of the number of clicks counted at each respective frequency.

Interpretation 2:

The number of clicks at 1,4 MHz and the number of clicks at 30 MHz which exceed the limit, L, for continuous disturbances during the observation time, T, are not measured but are assumed to be equal to the number of clicks counted at 500 kHz during the observation time T. The number of clicks at 1,4 MHz and the number of clicks at 30 MHz exceeding L_q are allowed to be one quarter of the number of clicks counted at 500 kHz.

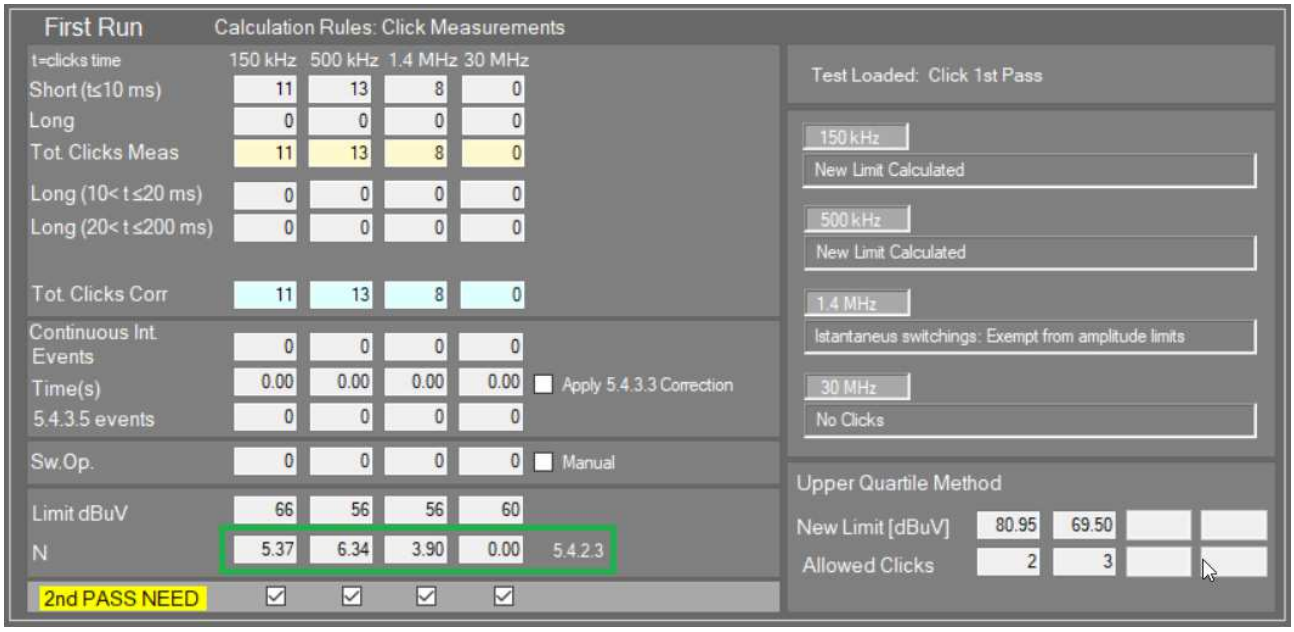
In any situation where it is necessary to verify the original measurement, the assessment method (interpretation 1 or 2) originally chosen shall be used in order to ensure consistency of the results.

The next **CISPR 14-1 Edition 7.0 – 2020-09** (stability date in 2023) does not include any Interpretation Sheet for the application of the upper quartile method anymore and it revises the click measurements procedure as follows:

> **5.4.2.3 Click rate**
>
> The click rates shall be calculated separately for each of the four frequencies specified in 5.4.2.1 using the observation time(s) determined according to 5.4.2.2.

AFJ Click Analysers model CL55C (out of production since 2014) satisfied this requirement selecting the CISPR MODE option.

AFJ Click Analysers model DDA55+ (and previously model DDA55) will satisfy this requirement with the next software updating:



The next software updating will allow to use both AFJ click analysers model DDA55+ and DDA55 according to the requirements of CISPR 14-1 Edition 6.0 – 2016-08 and CISPR 14-1 Edition 7.0 – 2020-09: